

# Quality of goat and sheep oocytes for in vitro embryo production

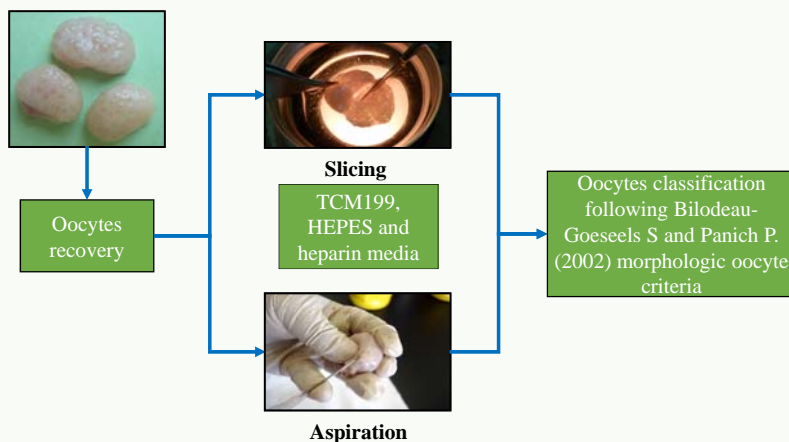
## Introduction

One of the most decisive steps in in vitro embryo production (IVEP) is the good quality oocytes selection, since these are those who have more possibilities to reach the blastocist phase. To be able to select them correctly there are certain morphologic traits that show us their quality.

## Objectives

- Obtain oocytes from prepubertal goat and sheep females using both slicing and aspiration.
- Classify the obtained oocytes according to their morphology.
- Compare the number and quality of the obtained oocytes between the two species and between the two techniques.

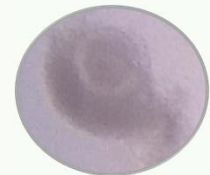
## Material and Methods



Quality 1 oocyte



Quality 2 oocyte



Quality 3 oocyte



Quality 4 oocyte



## Results

**Table 1:** quantity and quality in sheep and goat oocytes according to the recovery technique.

	Sheep		Goat	
	Slicing	Aspiration	Slicing	Aspiration
Nº of analyzed ovaries	10	10	10	10
Nº of recollected oocytes	158	76	776	257
Nº of recollected oocytes / ovary	15,8	7,6	77,6	25,7
Nº of quality 1 oocytes / ovary (%)	4,2 (26,58)	0,8 (10,53)	8,6 (11,08)	4,5 (17,51)
Nº of quality 2 oocytes / ovary (%)	5,2 (32,91)	3,1 (40,79)	29,1 (37,5)	15,3 (59,53)
Nº of quality 3 oocytes / ovary (%)	1,3 (8,23)	1 (13,16)	8,5 (10,95)	1,1 (4,28)
Nº of quality 4 oocytes or no usable oocytes / ovary (%)	5,1(32,28)	2,7 (35,53)	31,4 (40,46)	4,8 (18,68)
Nº of usable oocytes / ovary* (%)	10,7 <sup>a,b</sup> (67,72)	4,9 <sup>b</sup> (64,47)	46,2 <sup>c</sup> (59,54)	20,9 <sup>a</sup> (81,32)

a,b: different letters in the same row show statistical differences ( $P < 0.05$ ).

\*Nº of usable oocytes / ovary = Nº of quality 1 oocytes / ovary + Nº of quality 2 oocytes / ovary + Nº of quality 3 oocytes / ovary

## Conclusions

The number of usable oocytes is the same between slicing and aspiration in sheep. In the other hand, in goat the number is greater in slicing.

Between sheep and goat the number of usable oocytes is greater in goat both in slicing and aspiration.

## References

Bilodeau-Goeseels S and Panich P. Effects of oocyte quality on development and transcriptional activity in early bovine embryos. Animal Reproduction Science. 2002;71(3-4):143-155.